

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over GB 2085034 in view of USP 6733601 to Yazawa et al and JP 09184045.

GB 2085034 discloses the features including the claimed steel composition (page 1, lines 6-7), working and heat treat a steel tube-in-shell to form fine grain. The fine grain helps to form protective film of chromium oxide (page 1, lines 5-33). GB

2085034 does not disclose steps of working at elevated temperature, specific ferrite grain size, gaseous oxygen atmosphere, and pre-oxidation treatment time. Yazawa discloses steps of forming ferritic stainless steel pipe (abstract). The steps include hot-finishing-rolling "at a rolling temperature of at least one pass of about 650 °C to about 900 °C by a reduction of about 20 to about 40%/pass ..." JP 09184045 discloses steps of rolling ferritic steel with draft rate at least 95% and coiling the steel sheet at temperature up to 450°C. The steel sheet has surface oxide up to 3 µm thick and grain size at least crystal grain size number 12 (abstract). The grain size number of at least 12 reads on fine grain size as disclosed by GB 2085034 (page 1, lines 19-28). The claimed gaseous oxygen atmosphere reads on ambient. With respect to the pre-oxidation treatment time which is expected to be overlapped by GB 2085034 because the treatment temperature and oxide formation are anticipated.

Response to Arguments

Applicant's arguments filed December 20, 2007 have been fully considered but they are not persuasive.

Applicants argue that cold working is generally carried out at around room temperature. But, cold working is, known in the art of cited references, done at temperature below recrystallization temperature – not just room temperature.

Applicants' argument with respect to the oxide film composition is noted. But, it is immaterial because the rejected claim has no oxide composition being recited.

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Moreover, applicants fail to show by factual evidence that the composition of the oxides are in fact different.

Applicants' argument with respect to JP 09184045 is noted. But, JP 09184045 is cited to show the ferrite grain size is known for ferritic steel.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. JP 01172516 (abstract) and JP 03002355 (abstract) are cited to show that the recited ferritic steel working temperature range and reduction rate are known in the art of cited references.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

The above rejection relies on the reference(s) for all the teachings expressed in the text(s) of the references and/or one of ordinary skill in the metallurgical art would have reasonably understood or implied from the text(s) of the reference(s). To emphasize certain aspect(s) of the prior art, only specific portion(s) of the text(s) have been pointed out. Each reference as a whole should be reviewed in responding to the rejection, since other sections of the same reference and/or various combination of the cited references may be relied on in future rejection(s) in view of amendment(s).

All recited limitations in the instant claims have been met by the rejections as set forth above.

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Applicant is reminded that when amendment and/or revision is required, applicant should therefore specifically point out the support for any amendments made to the disclosure. See 37 C.F.R. § 1.121; 37 C.F.R. Part §41.37 (c)(1)(v); MPEP §714.02; and MPEP §2411.01(B).

Examiner Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Ip whose telephone number is (571) 272-1241. The examiner can normally be reached on Monday to Thursday from 5:30 A.M. to 4:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Roy V. King, can be reached on (571)-272-1244.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Sikyin Ip/

Primary Examiner, Art Unit 1793

March 28, 2008